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By- Prull, Richard W.; Very, Philip S.

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To evaluate undergraduate vocational teacher preparation programs in the state of Rhode Island, the 117 vocational educational graduates of the four institutions were surveyed to determine their opinions concerning their college experience. Responses from 66 graduates indicated that: (1) State needs are being fulfilled in vocational business teacher education, with the exception of the lack of training in distributive business education, (2) Agriculture teacher education supplies students with all necessary knowledge and skills in production agriculture; however, additional emphasis is needed in non-farm businesses, conservation, and food processing, (3) Home economics teacher education produces a sufficient number of well-trained teachers, (4) Trade and industrial teacher education has not kept pace with development of industry and technology and needs progressive change in order to compete with other states, and (5) Actual practical experience in a teacher's occupational field would help him to be a better teacher. (DM)

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A DESCRIPTION AND EVALUATION OF VOCATIONAL TEACHER TRAINING PROGRAMS IN THE STATE OF RHODE ISLAND

Richard W. Prull, Research Associate
Philip S. Very, Ph.D., Associate Director

Occupational Research Coordinating Unit
Rhode Island College
Providence, Rhode Island

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Summary

The present study is a critical examination of the existing programs for vocational teacher education in Rhode Island. Four institutions with teacher training programs were surveyed. The evaluation of these programs is based upon the experiences of students who recently graduated from them and the views and opinions of the faculty in the respective training programs.

Vocational Business Teacher Education shows positive trends and seems to fulfill the needs of the state, except the lack of training in distributive business education.

Agriculture Teacher Education supplies students with all necessary knowledge and skills as far as life and work on the farm are concerned; a weakness must be noticed in the training of students who desire to work or are forced by conditions to accept positions in non-farm businesses such as agriculture supply companies and service firms. Conservation and food processing should be included in the curriculum.

The Home Economics Teacher Education program produces a sufficient number of well-trained teachers up to this date. It should be kept in mind, however, that an increased demand for such teachers in the near future might require an expansion of the program.

The Trade and Industrial Teacher Education is the weakest link within the vocational teacher education system of the state, due primarily to the fast development of industry and technology. The methods of candidate selection and teacher training have remained behind and need progressive change in order to compete with other states.

The graduate students of all four institutions respond with strong agreement to two items. One expresses the certainty that actual practical experience in a teacher's occupational field would help him to be a better teacher. The other item finding full agreement is the view that student teaching is a valuable experience for vocational education teachers.

Introduction

The very nature of this research project is extensive because it tries to evaluate all undergraduate vocational teacher education programs in the state of Rhode Island.

The present study was undertaken in the belief that vocational teacher education, so often ignored in the past, is a key aspect in the successful expansion of vocational education. Without qualified and motivated teachers, our secondary and post-secondary vocational school programs will be unable to develop the complex skills and the understanding called for in business and industry today. Teacher trainers are rapidly becoming aware of this fact and are turning their attention to the improvement of teacher education.

This study reflects the growing concern among vocational educators to re-evaluate the present teaching methods in Rhode Island. Its purpose is to show the strong as well as weak areas in vocational teacher education in this state and to stimulate constructive innovation and promote further research. In a time of social unrest old values are re-examined and tested, including those related to methods of education. Some hope is expressed that the results of this study will point to some directions which vocational educators might judge worthwhile enough to consider.

Procedure

Each of the collegiate institutions with vocational education teacher training programs was asked to submit a list of students who had graduated within the last three years.

A questionnaire of thirty items was constructed to cover the views of the students and the faculty from all the vocational teacher education programs. Because of its general nature, a letter was enclosed with each questionnaire explaining that the items referred to the particular individual's college experience, and that he was to answer each question in that light. A Likert scale from 1-7 was utilized, ranging from strongly agree (1) to strongly disagree (7).

The institutions with vocational teacher training programs, the number of recent graduates reported, and the number of former students responding to our questionnaire are as follows:

College	Program	Graduates	Respondents
Univ. of Rhode Island	Agric. Education	14	14
Univ. of Rhode Island	Business Education	Unknown	None
Univ. of Rhode Island	Home Economics	27	18
Barrington College	Business Education	12	4
Bryant College	Business Education	50	24
Rhode Island College	Trade and Indus. Educ.	14	6
	TOTAL:	117	66

Due to the small program enrollment in some schools, the number of respondents is also small. The size of our samples is, therefore, a function of the small populations from which they have been drawn.

Results

A. Vocational Agriculture Teacher Education

Vocational Agriculture Teacher Education in Rhode Island is implemented at the University of Rhode Island and has a small but well-established program. At present the average number of student teachers placed in cooperating secondary schools is eight per year. The student teaching seminars are held in these various cooperating schools enabling the students to see first hand how other schools operate.

The teacher education option in agriculture prepares students for careers in the broad field of agricultural education. Graduates are qualified to teach agricultural science and mechanics in secondary and post-secondary public and private schools for positions in various educational fields connected with agriculture, commerical organizations, and governmental agencies; it also enables them to take advanced studies leading to positions in supervision, teaching, and research.

The students take fundamental courses in all fields of technical agriculture and schedule the professional courses in education and psychology necessary for state teacher certification. Teacher education students do not major in education but major in either agricultural business, agricultural technology, or agricultural science; education is made their minor because there is no College of Education at the University of Rhode Island. Flexibility in meeting the needs of individual students is gained through a liberal number of electives. The required curriculum is outlined in Table I.

The agriculture courses are taught by faculty members of the College of Agriculture; the vocational agriculture teacher education courses are taught by a faculty member, who also functions as the student teaching coordinator and adviser for the agricultural education students. So in practice there is one faculty member who does both direct and teach the educational aspects of agriculture.

The teacher education program in agriculture at U.R.I. appears to be basically fulfilling the needs of the state. According to the questionnaires returned (See

Table II) there is a general feeling of teaching competency among recent graduates. Agreement is strong concerning the need for practical experience in the field one is teaching, the value of student teaching, and the necessity for finding ways to provide secondary school students with more practical experience. Some concern was expressed over whether enough time is spent in shop work and whether shop facilities are up-to-date.

During the first half of the present decade, the emphasis in public school education in agriculture was put on the preparation of students to work on the farm or in the farm home. This fact is understood by considering the nation's farming system at that time. The emphasis in public school education has shifted, however; today there is a recognition that agricultural education encompasses a great deal more than preparation for limited farm occupations. There are a great number of non-farming occupations that involve a knowledge of agriculture. Within the past few years investigations have been completed in at least twenty-six states which show employment openings in non-farm businesses and industrial firms for persons having knowledge and skill in agriculture (Warmbrod and Phipps, 1966).

The findings of these state and area studies indicated that a) approximately one-half of the workers employed in non-farm agricultural -- oriented businesses need education or training in agriculture; b) employers estimate approximately a twenty percent increase during the next five years in the number of employees who need competencies in animal, plant, or soil science and in agricultural mechanics; c) the firms expressing the greatest need for workers possessing these agricultural skills were sales and service businesses dealing in agricultural supplies, agricultural machinery, ornamental horticulture, and marketing and distributing of livestock and crop products.

Above findings show the need for an expanded form of agricultural education, including a broader scope of agricultural teacher education. The development of secondary and post-secondary education and teacher education should be parallel so

that it insures to produce qualified personnel for farm and non-farm businesses alike.

The following specific recommendations are the result of observations made during this study; it is felt that their instrumentation would strengthen the existing program.

First, add to the curriculum special courses for conservation and outdoor recreation. These two fields are rapidly gaining in importance as the nation's population expands.

Second, place more emphasis on food technology throughout the curriculum and include it in counseling and information dissemination. Food technology and food processing are as important in today's economy as food production and harvesting.

Third, tailor the mechanical agriculture courses more to the needs of education students so that they may derive more meaning and practical benefit from them.

Fourth, either introduce a new course or modify the existing introductory course (Ed. 44) to provide a good basic orientation for agriculture education students. Such an innovation would allow more time in a regular methods course for appropriate material.

Fifth, the faculty should be encouraged to treat students as individuals with worth and dignity. Education is only as effective as the interpersonal communication on which it is based.

Sixth, add to the vocational agriculture staff an additional qualified faculty member (doctorate in agricultural education if possible). This would provide for more effective counseling, inservice education supervision, and course instruction, both at the undergraduate and graduate level. In addition, a more realistic faculty load distribution would be an impetus for research and development by the graduate students and staff.

TABLE I
University of Rhode Island
Vocational Agriculture Education Curriculum

Freshman Year

	Credits		Credits
Agriculture 1	0	English 2	3
Animal Science 1	3	Zoology 1 or Biology 2	4-3
Botany 1 or Biology 1	4-3	History 4	3
English 1	3	Horticulture 4 or Agronomy 4	3
Food & Resource Economics 5	3	Mathematics 9	3
History 3	3	Physical Education 2	1
Physical Education 1	1	Elective	1

Sophomore Year

Chemistry 1 or 3	4	Agronomy 12	3
Speech 1	3	Chemistry 4	4
Social Science Elective	3	Agriculture Elective	3
Agriculture Elective	3	Humanities Elective	3
Electives	3	Electives	3
Physical Education 3	1	Physical Education 4	1

Junior Year

Genetics 1	3	Education 12	3
Contemporary Problems Elective	3	Mechanized Agriculture 2	3
Education 2	3	Humanities Elective	3
Psychology 7	3	Social Science Elective	3
Mechanized Agriculture 1	3	Science Elective	3
Elective	3	Elective	3

Senior Year

Education 44	3	Education 84	12
Mechanized Agriculture Elective	3	Education 85	3
Humanities Elective	3		
Electives	9		

Total Credits Required: 136
Minimum No. of Agriculture Credits: 40

TABLE II

Means and Standard Deviations of Attitudes
Expressed by Recent Agriculture Education Graduates* N=14

Item Number	Mean	Standard Deviation
1. I feel that most vocational education teachers are well prepared with respect to methods and techniques of teaching.	2.71	1.44
2. When it comes to lesson planning most teachers feel that they are unable to do a good job of identifying the vocabulary and interest levels that are appropriate for students.	4.93	1.22
3. Most teachers find it difficult to construct written tests and accurately evaluate students through them.	4.57	1.50
4. It is difficult to evaluate students through the use of oral tests.	5.07	1.71
5. Most vocational education teachers feel confident in their command of the subject matter when they are planning their lessons.	2.50	0.63
6. Generally speaking, most vocational education teachers are well trained in their occupational specialties.	2.86	1.19
7. Actual practical experience in a teacher's occupational field would help him to be a better teacher.	1.21	0.41
8. Most vocational education college professors do not allow for individual differences among their students.	4.71	1.39
9. There is not enough "on-the-job" training in teacher education that counts for college credit.	2.86	1.85
10. Most vocational education college professors organize their lessons well.	2.57	1.29
11. The practical or technical aspects of teacher education programs should concentrate more on a single specialty.	5.14	1.64
12. College professors in vocational education usually teach so as to arouse student interest and motivation.	3.93	1.87

Item Number	Mean	Standard Deviation
13. There is not an acceptable balance between progress in the various occupational fields and the introduction of this progress into vocational education.	4.00	1.77
14. Most college professors in vocational education react favorably to suggestion and criticism.	3.14	1.55
15. The physical plant (classrooms, shops, laboratories, offices) available during teacher education are most adequate.	4.29	1.48
16. There is not a sufficient amount of time spent in teacher education in the study of the evaluation of students through performance testing.	3.29	1.71
17. The assignments and grades given by vocational education college educators are very fair.	2.64	1.34
18. There is a sufficient amount of expendable materials for use in vocational teacher education projects.	4.71	1.58
19. The supervisors during student teaching are generally thoughtful and instructive.	2.43	1.72
20. Vocational education teachers quite often have a difficult time working out a logical presentation sequence for their lessons.	4.86	1.68
21. Most of the vocational education professors have a good knowledge of their particular subject area.	2.64	1.39
22. Vocational education teachers could do a good job in curriculum planning if called upon to do so.	2.50	0.91
23. The equipment and facilities available during the education of a vocational teacher are not representative of what is presently found in actual occupational fields.	2.57	1.59
24. Student teaching is a valuable experience for vocational education teachers.	1.57	1.05
25. Because of the rapidly changing technology of today, vocational teachers should not stress specific vocational skills, but rather try to give their students a solid technological base from which they can change as new methods are developed.	2.29	1.39

Item Number	Mean	Standard Deviation
26. Vocational education teachers should concentrate on developing comprehensive rather than specialized skills in their students.	2.71	1.22
27. There should be more stress in vocational teacher education on the social sciences and a general liberal education than is presently found.	4.43	2.03
28. Vocational teachers should be more familiar with ways of providing their students with a greater amount of practical experience.	1.93	0.59
29. The atmosphere, or learning conditions, during practical or technical teacher education training are stimulating and conducive to learning.	3.21	1.78
30. Increasing specialization at the vocational teacher education level and the secondary school level is necessary to keep pace with the rapidly expanding technology of today.	2.29	1.28

* Items with a mean of less than 2.5 or greater than 5.5, and a standard deviation of less than 2.00 are most relevant.

B. Vocational Business Teacher Education

Rhode Island is presently served by three business teacher education programs situated at Barrington College, Bryant College, and the University of Rhode Island. Together they produce approximately seventy-five teachers each year.

Barrington College

The Bachelor of Science degree is granted to majors in business education at Barrington College, a small school in the process of expansion. The requirement for biblical studies in the curriculum is a reflection of the fact that Barrington College was for some time a bible college. Two areas of concentration are available in the vocational business area: secretarial business, and accounting and social business. Both curricula meet state certification requirements. Forty hours of business education courses are required for a degree with concentration in secretarial business subjects and thirty-six hours for concentration in accounting and social business subjects. The required curricula are outlined in Table III.

Presently the business education department is composed of three faculty members which is an adequate number considering that the school places less than 10 seniors a year. From all indications it appears that the recent graduates of Barrington College feel satisfied with their education and competent in their teaching abilities. They indicate, however, that they should be more familiar with ways of providing their students with practical experience in business. Student reaction to their teachers is very favorable (Table IV).

The program at Barrington College is small but appears to gain a good deal of strength from the close student-teacher relationship that is maintained. The students are being educated as well as trained, a factor which strengthens their abilities as teachers. A recommendation that must be made, however, is that the curriculum is strengthened in the behavioral science area. The general psychology

course presently required is in itself not adequate to acquaint the future teacher with the practical and professional problems encountered in his field. Courses suited to expose education students to the psychology of learning and adolescent psychology should be required. An introduction to the use and interpretation of psychological tests would also be beneficial in providing them with the background necessary for intelligent evaluation of educational and psychological measurements.

Bryant College

The business teacher education program at Bryant College consists of four and one-half years of schooling, including eighteen weeks of student teaching. Presently two major areas of concentration are offered, business administration and secretarial. The business administration curriculum prepares students to teach all business subjects except shorthand on the secondary school level; the secretarial major prepares graduates to teach all subjects, including shorthand at the secondary level. The approved curricula are shown in Table V.

Thought has been given to add six credit hours of methodology in order to establish a major in distributive education, but as yet no steps have been taken in that direction. This is fortunate because such a plan would not provide the necessary background for an adequate distributive teacher education program. A completely new curriculum would be essential for such an innovation.

Bryant College places close to fifty student teachers a year and supplies approximately two-thirds of the business education teachers produced in Rhode Island. There is an agreement between Bryant College and the University of Rhode Island which provides that Bryant College places their student teachers in the fall and the University of Rhode Island places theirs in the spring. In this way the student teaching load in the state is more evenly distributed throughout the year, aiding thereby the secondary schools and the two colleges.

The chairman of the business education and four other faculty members compose the staff particularly concerned with the teaching of education majors. At the present time Bryant College has at least one member of this staff holding a doctorate degree, which is not the case at Barrington College or the University of Rhode Island. The doctorate does not necessarily imply better teaching ability or more interest of the students in their subjects, but departments having such faculty members might have a broader outlook on their field and a better direction for the improvements they hope to realize.

The recent graduates (Table VI) feel that their education has been good and that their teaching abilities are adequate. Like the Barrington College graduates, they all apparently think that they should be made more familiar with ways of providing their students with practical experience in business. There is general agreement that the faculty members at Bryant College have a good knowledge of their subjects; the student's reaction to certain qualities of their teachers, however, especially in the realm of acceptance of student criticism and arousal of student interest and motivation, is noticeably negative.

University of Rhode Island

The University of Rhode Island grants a business education degree which fulfills state requirements and enables students to become teachers of business subjects at the secondary school level. The curriculum for the required 138-140 credits necessary for graduation is shown in Table VII.

The second largest source of business teachers in Rhode Island, this program currently placed (spring, 1968) approximately seventeen student teachers. The staff connected with business education in particular numbers two at the moment; one faculty member, the only individual with a doctorate, recently left the school. A replacement is being sought at this time.

No information can be given concerning the attitudes of recent graduates, because no names were forwarded to the Research Coordinating Unit, in spite of such a request.

At the present time Barrington College, Bryant College, and the University of Rhode Island are providing more than enough qualified business education teachers for this state. Improvement and not expansion of already existing programs is therefore the issue to be confronted.

Business teacher education in Rhode Island is in the greatest sense traditional. That is, teachers are trained in areas which have been, and still are, of vital importance to business. There is a prevalent attitude in Rhode Island, however, which narrows business teacher education and prevents it from expanding into other areas. A case in point is distributive education. A sizeable number of studies (Lowe, 1963; Rogers, 1962; Strietelmeier, 1962) have indicated the need, feasibility, and desire for programs in distributive education. In many cases business firms were willing to cooperate in such programs. Rhode Island is slowly moving towards this field in secondary education, but thus far has not ventured to institute the

necessary teacher training programs. It is felt that distributive teacher education should be started in Rhode Island in the near future, the existing business education facilities being adequate for use as its basis. One distributive teacher education program would be adequate for the state; there are not enough positions available for graduates to justify more than one. The University of Rhode Island has the facilities to expand and at the same time is under state control. A program at this institution would perhaps have the most promise of succeeding.

This new program cannot be initiated merely by adding certain courses to the curriculum. A new approach encompassing a strong area of marketing and distributing will be necessary. Methodology courses differing from those presently offered and stressing techniques used in distributive education are also required. Regardless of the precise make-up of the program, it is essential above all that enough flexibility be incorporated so that the needs of each individual will be met.

An additional but important point is that the students should do their student teaching directly in the area of distributive education, and not in other areas of business education. A requirement for work experience in distributive businesses themselves should be given consideration as a vital factor in the education of these future teachers.

In closing this section it should be mentioned that it appears to be an aversion to "vocational" education that is keeping Rhode Island's business teacher education programs from expanding into new areas which could be of great value. Business educators have tended to divorce themselves from vocational ideas and objectives, perhaps not realizing that in fact they are educating teachers to impart occupational skills to their students. Vocational education should not be regarded as the lowest level of academia, as is so often the case; its purposes and products are just as essential to our society as that of a pure "liberal arts" education. Perhaps when this is fully realized, greater strides will be taken towards achieving needed goals in business education.

TABLE III
Barrington College
Secretarial Business Major Curriculum

1. Biblical Studies.....30 hours
   a. The required 30 semester hours must be comprised of 6-15 hours in Theology and 15-24 in Bible.

2. Humanities.....18-30 hours
   a. English Composition.....4 hours
      Proficiency for 3 or 6 hours may be granted on the basis of acceptable scores on a standardized English test.
   b. Literature (Survey courses).....4 hours
   c. Foreign Language.....12 hours
      Proficiency for all or part of this requirement may be granted on the basis of acceptable scores on a standardized language test.
   d. Philosophy (Either PH 301 or 302).....4 hours
   e. Fine Arts.....4 hours

3. Social Studies.....6-27 hours
   a. General Psychology.....4 hours
   b. Economics.....4 hours

4. Natural Sciences.....8-14 hours
   a. Basic Mathematics.....3-6 hours
      Proficiency for 3 or 6 hours may be granted on the basis of satisfactory performance on a mathematics examination.
   b. Laboratory Science.....8 hours

5. Business Education
   a. BE 151 Typewriting I.....4 hours
   b. BE 251 Advanced Typewriting II.....5 hours
   c. BE 261-262-361 Shorthand I, II, III.....5 hours
   d. BE 362 Advanced Skills.....5 hours
   e. BE 272 Business Machines.....5 hours
   f. BE 281-282 Accounting I, II.....5 hours
   g. BE 391 Business Law I.....4 hours
   h. BE 431 Office Procedures.....4 hours
   i. BE 433 Methods of Teaching Business Subjects.....4 hours

6. Physical Education, ½ credit for four semesters.....2 hours

7. Practical Christian Service as assigned by the Department

Accounting and Social Business Major Curriculum

1. Biblical Studies.....30 hours
   a. The required 30 semester hours must be comprised of 6-15 hours in Theology and 15-24 in Bible.

2. Humanities.....18-30 hours
   a. English Composition.....4 hours
      Proficiency for 3 or 6 hours may be granted on the basis of acceptable scores on a standardized English test.

b. Literature (Survey courses).....4 hours
c. Foreign Language.....12 hours
Proficiency for all or part of this requirement may be granted on the basis of acceptable scores on a standardized language test.
d. Philosophy (Either PH 301 or 302).....4 hours
e. Fine Arts.....4 hours

3. Social Studies.....6-27 hours
a. General Psychology.....4 hours
b. Economics.....4 hours

4. Natural Sciences.....8-14 hours
a. Basic Mathematics.....2-6 hours
Proficiency for 3 or 6 hours may be granted on the basis of satisfactory performance on a mathematics examination.
b. Laboratory Science.....8 hours

5. Business Education
a. BE 151 Typewriting I.....4 hours
b. BE 251 Advanced Typewriting II.....5 hours
c. BE 272 Business Machines.....5 hours
d. BE 281-282 Accounting I, II.....5 hours
e. BE 381 Accounting III.....5 hours
f. BE 391-392 Business Law I, II.....4 hours
g. BE 442 Business Principles and Management.....4 hours
h. BE 433 Methods of Teaching Business Subjects.....4 hours

6. Physical Education, ½ credit for four semesters.....2 hours

7. Practical Christian Service as assigned by the Department

TABLE IV

Means and Standard Deviations of Attitudes
Expressed by Recent Business Education Graduates at Barrington College* N=4

Item	Mean	Standard Deviation
1. I feel that most vocational education teachers are well prepared with respect to methods and techniques of teaching.	2.50	0.50
2. When it comes to lesson planning most teachers feel that they are unable to do a good job of identifying the vocabulary and interest levels that are appropriate for students.	5.25	1.30
3. Most teachers find it difficult to construct written tests and accurately evaluate students through them.	5.00	1.22
4. It is difficult to evaluate students through the use of oral tests.	3.75	1.64
5. Most vocational education teachers feel confident in their command of the subject matter when they are planning their lessons.	2.00	0.71
6. Generally speaking, most vocational education teachers are well-trained in their occupational specialties.	2.00	0.00
7. Actual practical experience in a teacher's occupational field would help him to be a better teacher.	1.75	0.83
8. Most vocational education college professors do not allow for individual differences among their students.	5.50	1.50
9. There is not enough "on-the-job" training in teacher education that counts for college credit.	3.75	1.92
10. Most vocational education college professors organize their lessons well.	2.00	0.71
11. The practical or technical aspects of teacher education programs should concentrate more on a single specialty.	4.00	1.87
12. College professors in vocational education usually teach so as to arouse student interest and motivation.	2.50	0.87
13. There is not an acceptable balance between progress in the various occupational fields and the introduction of this progress into vocational education.	4.25	1.30

Item	Mean	Standard Deviation
14. Most college professors in vocational education react favorably to suggestion and criticism.	2.50	1.50
15. The physical plant (classrooms, shops, laboratories, offices) available during teacher education are most adequate.	4.75	1.64
16. There is not a sufficient amount of time spent in teacher education in the study of the evaluation of students through performance testing.	3.25	1.09
17. The assignments and grades given by vocational education college educators are very fair.	1.50	0.50
18. There is a sufficient amount of expendable materials for use in vocational teacher education projects.	4.25	0.83
19. The supervisors during student teaching are generally thoughtful and instructive.	4.25	2.17
20. Vocational education teachers quite often have a difficult time working out a logical presentation sequence for their lessons.	6.25	0.43
21. Most of the vocational education professors have a good knowledge of their particular subject area.	2.00	0.00
22. Vocational education teachers could do a good job in curriculum planning if called upon to do so.	2.25	0.43
23. The equipment and facilities available during the education of a vocational teacher are not representative of what is presently found in actual occupational fields.	4.25	1.92
24. Student teaching is a valuable experience for vocational education teachers.	2.00	1.22
25. Because of the rapidly changing technology of today, vocational teachers should not stress specific vocational skills, but rather try to give their students a solid technological base from which they can change as new methods are developed.	4.00	1.87
26. Vocational education teachers should concentrate on developing comprehensive rather than specialized skills in their students.	2.75	0.83

Item	Mean	Standard Deviation
27. There should be more stress in vocational teacher education on the social sciences and a general liberal education than is presently found.	5.00	1.22
28. Vocational teachers should be more familiar with ways of providing their students with a greater amount of practical experience.	2.25	0.83
29. The atmosphere, or learning conditions, during practical or technical teacher education training are stimulating and conducive to learning.	2.75	0.43
30. Increasing specialization at the vocational teacher education level and the secondary level is necessary to keep pace with the rapidly expanding technology of today.	2.75	0.83

* Items with a mean of less than 2.5 or greater than 5.5, and a standard deviation of less than 2.00 are most relevant.

TABLE V
Bryant College
Course Sequence for Teacher Education
Business Administration Majors

First Year

First Semester	Semester Hours	Second Semester	Semester Hours
English Composition I	3	English Composition II	3
Accounting I	3	Accounting II	3
Mathematics of Finance	3	Typewriting II	2
Typewriting I or		Economic History	3
Typewriting IA	2	Survey of Law II	3
Word Study and Mechanics		History of Education	2
of English	3		
Survey of Law I	3		

Summer Sessions

	Semester Hours
Introduction to Geography	3
Introduction to Literature	3
Principles of Economics	3

Second Year

First Semester	Semester Hours	Second Semester	Semester Hours
Accounting III	3	Accounting IV	3
Philosophy of Education	2	Written Communications	3
General Psychology	3	Adolescent Psychology	3
Principles of Marketing	3	Principles of Retailing	3
Western Civilization Since		Money and Banking	3
1600	3		
Literature Elective	3		

Summer Sessions

	Semester Hours
Economic Geography	3
Office Machines	2
Duplicating Machines	1

Third Year

First Semester	Semester Hours	Second Semester	Semester Hours
Oral Communications	3	Methods of Teaching	
Psychology of Learning	3	Typewriting	3
Methods of Teaching Social		Methods of Teaching	
Business Subjects	3	Bookkeeping	3
Accounting V	3	Principles of Salesmanship	3
Science Elective 3		Accounting VI	3
		Introduction to Statistics	3
		Science Elective	3

Fourth Year

First Semester	Semester Hours	Second Semester	Semester Hours
Student Teaching (18 weeks)	6-12	Tests and Measurements	2
		United States History	3
		Principles of Sociology	3
		Political Science	3
		General Studies Elective	3

Course Sequence for Teacher Education Secretarial Majors

First Year

First Semester	Semester Hours	Second Semester	Semester Hours
English Composition I	3	English Composition II	3
Accounting I	3	Accounting II	3
Mathematics of Finance	3	Shorthand Theory II and Shorthand Dictation	3
Shorthand Theory I or Shorthand Review	3	Typewriting II	2
Word Study and Mechanics of English	3	Economic History	3
Typewriting I or IA	2	History of Education	2

Summer Sessions	Semester Hours
Introduction to Geography	3
Introduction to Literature	3
Principles of Economics	3

Second Year

First Semester	Semester Hours	Second Semester	Semester Hours
Accounting III	3	Accounting IV	3
Shorthand Dictation	3	Written Communications	3
General Psychology	3	Adolescent Psychology	3
Western Civilization Since 1600	3	Shorthand Dictation	3
Typewriting III	2	Typewriting IV	2
Philosophy of Education	2	Money and Banking	3

Summer Sessions	Semester Hours
Economic Geography	3
Office Machines	3
Office Techniques	3

Third Year

First Semester	Semester Hours	Second Semester	Semester Hours
Oral Communications	3	Methods of Teaching Typewriting	3
Psychology of Learning	3	Methods of Teaching Bookkeeping	3
Methods of Teaching Social Business Subjects	3	Methods of Teaching Shorthand	3
Survey of Law I	3	Machine Transcription	3
Science Elective	3	Introduction to Statistics	3
		Science Elective	3

Fourth Year

First Semester	Semester Hours	Second Semester	Semester Hours
Student Teaching (18 weeks)	6-12	Tests and Measurements	2
		United States History	3
		Principles of Sociology	3
		Political Science	3
		Literature Elective	3

Electives are subject to the approval of the Dean

TABLE VI

Means and Standard Deviations of Attitudes Expressed
By Recent Business Education Graduates at Bryant College* N=24

Item	Mean	Standard Deviation
1. I feel that most vocational education teachers are well prepared with respect to methods and techniques of teaching.	2.42	1.11
2. When it comes to lesson planning, most teachers feel that they are unable to do a good job of identifying the vocabulary and interest levels that are appropriate for students.	4.58	1.58
3. Most teachers find it difficult to construct written tests and accurately evaluate students through them.	3.54	1.78
4. It is difficult to evaluate students through the use of oral tests.	3.63	1.41
5. Most vocational education teachers feel confident in their command of the subject matter when they are planning their lessons.	1.92	0.91
6. Generally speaking, most vocational education teachers are well-trained in their occupational specialties.	1.75	0.72
7. Actual practical experience in a teacher's occupational field would help him to be a better teacher.	1.58	1.26
8. Most vocational education college professors do not allow for individual differences among their students.	3.33	1.65
9. There is not enough "on-the-job" training in teacher education that counts for college credit.	3.63	1.98
10. Most vocational education college professors organize their lessons well.	2.96	1.40
11. The practical or technical aspects of teacher education programs should concentrate more on a single specialty.	4.83	1.43
12. College professors in vocational education usually teach so as to arouse student interest and motivation.	3.79	1.73

Item	Mean	Standard Deviation
13. There is not an acceptable balance between progress in the various occupational fields and the introduction of this progress into vocational education.	3.88	1.51
14. Most college professors in vocational education react favorably to suggestion and criticism.	3.46	1.35
15. The physical plant (classrooms, shops, laboratories, offices) available during teacher education are most adequate.	4.00	1.73
16. There is not a sufficient amount of time in teacher education in the study of the evaluation of students through performance testing.	3.46	1.73
17. The assignments and grades given by vocational education college educators are very fair.	3.17	1.40
18. There is a sufficient amount of expendable materials for use in vocational teacher education projects.	3.50	1.53
19. The supervisors during student teaching are generally thoughtful and instructive.	3.04	2.11
20. Vocational education teachers quite often have a difficult time working out a logical presentation sequence for their lessons.	5.42	1.26
21. Most of the vocational education professors have a good knowledge of their particular subject area.	2.04	0.93
22. Vocational education teachers could do a good job in curriculum planning if called upon to do so.	2.67	1.21
23. The equipment and facilities available during the education of a vocational teacher are not representative of what is presently found in actual occupational fields.	4.17	1.82
24. Student teaching is a valuable experience for vocational education teachers.	1.67	1.34
25. Because of the rapidly changing technology of today, vocational teachers should not stress specific vocational skills, but rather try to give their students a solid technological base from which they can change as new methods are developed.	2.67	1.70

Item	Mean	Standard Deviation
26. Vocational education teachers should concentrate on developing comprehensive rather than specialized skills in their students.	3.08	1.68
27. There should be more stress in vocational teacher education on the social sciences and a general liberal education than is presently found.	3.21	1.38
28. Vocational teachers should be more familiar with ways of providing their students with a greater amount of practical experience.	2.13	1.39
29. The atmosphere, or learning conditions, during practical or technical teacher education training are stimulating and conducive to learning.	3.08	1.44
30. Increasing specialization at the vocational teacher education level and the secondary school level is necessary to keep pace with the rapidly expanding technology of today.	2.79	1.53

* Items with a mean of less than 2.5 or greater than 5.5, and a standard deviation of less than 2.00 are most relevant.

TABLE VII
University of Rhode Island
Business Education Curriculum

Freshman Year

First Semester		Second Semester	
Introduction to Business Data Processing	1	Decisions in Business Administration (required)	0
Introduction to Quantitative Analysis for Business and Economics	3	Introduction to Business Data Processing	1
Bus. Ed. 21 - Elementary Typewriting	2	Speech Elective	3
Hist. 3 - History of Western Civilization to 1715	3	* Science Elective	3-4
* Science Elective	3-4	Bus. Ed. 22 - Advanced Typewriting	2
Eng. 1 - Composition	3	Hist. 4 - History of Western Civilization since 1715	3
Physical Education 1M or 1W - Physical Education	1	Eng. 2 - Literature and Composition	3
+ Elective	1	Physical Education 2M or 2W - Physical Education	1
	17-18	+ Elective	1
			17-18

Sophomore Year

First Semester		Second Semester	
Acct. 1 - Elementary Accounting	3	Acct. 2 - Elementary Accounting	3
Mgt. 3 - Principles of Management	3	Ed. 2 - Introduction to American Education	3
Econ. 25 - Economic Principles	3	Econ. 26 - Economics Principles	3
Bus. Ed. 52 - Business Machines or		Psy. 7 - General Psych. Humanities Elective or	
Humanities Elective	3	Bus. Ed. 52 - Business Machines	3
Physical Education 3M or 3W - Physical Education	1	Physical Education 4M or 4W - Physical Education	1
Elective	1	Elective	1
Mkt. Mgt. 10 - Survey of Marketing	3		
	17		17

* To be selected from Astronomy, Biology, Botany, Chemistry, Geology, Physics and Zoology.

\+ Students may elect Military Science or substitute other courses earning the equivalent of 4 credits before graduation.

Junior Year

First Semester		Second Semester	
Bus. Ed. 31 - Elementary Shorthand	4	Bus. Ed. 32 - Advanced Shorthand	4
Acct. 11 - Intermediate Accounting	3	Acct. 12 - Intermediate Accounting	3
Bus. Law 33 - Law in a Business Environment	3	Bus. Law 34 - Law in a Business Environment	3
Ed. 12 - Psychology of Learning	3	Ed. 30 - Methods and Materials in Secondary Teaching	3
Humanities Elective	3	Humanities Elective	3
Elective	3	Fin. 21 - Corporation Finance	3
	19		19

Senior Year

First Semester		Second Semester	
Bus. Ed. - Dictation and Transcription	4	Ed. 84 - Supervised Student Teaching	12
Ed. 41 - Methods and Materials of Teaching Business Subjects	4	Ed. 85 - Seminar in Teaching	3
Ed. 71 - Educational Measurements	3		15
Contemporary Problems	3		
63 - Electronic Data Processing for Business and Industry	3		
	17		

Total credits required: 138-140

C. Home Economics

University of Rhode Island

The home economics teacher education program at the University of Rhode Island is well established (sixty years) and is keeping pace with the state's needs. At this time (spring, 1968), there are thirty seniors enrolled. Graduates of the program meet state certification requirements and are prepared to teach in junior or senior high schools; they also can teach adult classes in home economics. Graduate work culminating in a Master of Science degree is available. The required curriculum for the bachelor's degree is in Table VIII.

The staff currently numbers three, with an additional faculty member planned for in the near future. These staff members are directly concerned with home economics education and are part of a larger department of general home economics.

Recent graduates of the program voice confidence in their abilities as teachers and react favorably to their learning experience at the university. Student teaching and practical experience in home economics are mentioned as necessary factors in their education, but there are indications that the graduates would have preferred a <u>greater</u> introduction to the practical aspects of teaching and administration than they have found in their work (see Table IX). There is agreement on the necessity of developing specialized skills as teachers, but at the same time it is realized that they, as teachers, should educate their students in a manner which would enable them to change and develop with the advent of new ideas and methods.

At present this program appears to be producing enough graduates to meet the demands of the state's school systems. However, this situation may soon change if home economics education becomes more "vocational" as it appears to become in many parts of this country. For many years it was questioned whether home economics at the secondary level should assume any responsibility for preparing students for wage earning occupations. With the passage of the Vocational Education Act of 1963, this objective is rapidly finding acceptance as one aspect of the secondary home economics

program. Some of the reasons for the incorporation of employment education into the program were listed by Simpson (1964):

1. A large number of women work outside the home; thus, we have the responsibility to help prepare them for the other half of their dual roles.

2. There are fewer positions available for the unskilled; home economics has the potential for teaching wage-earning skills.

3. A large percentage of unmotivated young people drop out of school; evidence suggests that they are more likely to remain in school when education for employment is offered. Home economics can contribute to this program.

4. The number of service occupations has greatly increased and many have a relationship to home economics.

5. Too few high school students are receiving vocational education; home economics has a contribution to make in education for employment.

This belief is not only emerging throughout the country, it is in fact being implemented in many stages; Blunier (1963) found that 49 percent of all state supervisors reported some programs concerned with employment education.

The need exists; many studies (Lathan, 1965; Rossi, 1966; Swope, 1964-65) show the demand for individuals with home economics and related training. Home economics is encompassing a greater area than ever before, and its teacher education facilities will have to keep pace. Fortunately, there is a growing awareness of this tendency at the University of Rhode Island and indications are that progress will be made in this direction shortly.

TABLE VIII
University of Rhode Island
Home Economics Teacher Education Curriculum

Group I, Required of all students		Credits
A. Biology 1 and 2		6
B. Chemistry		8
C. Social Science		15
History 3 and 4	6	
Economics 23	3	
Psychology 7	3	
Sociology 1	3	
D. Art 1		3
E. Literature		6
F. English 1 and 2		6
G. Physical Education		4
H. Home Economics 1		0
I. Contemporary Problems		3
		51

Group II, Required of all students	
CF 1 -- Personal and Family Living	3
CF 5 -- Growth and Development of Children	3
CF 123 -- Marriage and Family Relationships	3
FN 1 -- Nutrition and Food Preparation	3
FN 7 -- General Nutrition	3
FN 21 -- Meal Management	3
HM 1 -- Management in Family Living	2
HM 3 -- Family Economics	2
HM 4 -- Family Housing	2
TC 3 -- Consumer Problems in Textiles and Clothing	3
TC 5 -- Introductory Clothing	
or	
TC 24 -- Clothing for the Family	3
	30

In addition to the courses listed in Groups I and II, the courses listed below are required:

CF 21 -- Family and Community Health	3
CF 31 -- Introduction to Work with Children	3
Ed. 2 -- Introduction to American Education	3
Ed. 12 -- Psychology of Learning	3
Ed. 37 -- Teaching of Home Economics	3
Ed. 39 -- Teaching of Home Economics	3
Ed. 84 -- Supervised Student Teaching	8
Education Elective	2
HM 33 -- Home Furnishings	3
HM 37 -- Household Equipment	3
HM 41 -- Home Management House	4
TC 25 -- Intermediate Clothing	3

TABLE IX

Means and Standard Deviations of Attitudes
Expressed by Recent Home Economic Education Graduates at U.R.I.* N=18

Item	Mean	Standard Deviation
1. I feel that most vocational education teachers are well prepared with respect to methods and techniques of teaching.	3.22	1.55
2. When it comes to lesson planning most teachers feel that they are unable to do a good job of identifying the vocabulary and interest levels that are appropriate for students.	4.78	1.55
3. Most teachers find it difficult to construct written tests and accurately evaluate students through them.	3.89	1.76
4. It is difficult to evaluate students through the use of oral tests.	3.67	1.97
5. Most vocational education teachers feel confident in their command of the subject matter when they are planning their lessons.	3.83	1.50
6. Generally speaking, most vocational education teachers are well-trained in their occupational specialties.	3.83	1.50
7. Actual practical experience in a teacher's occupational field would help him to be a better teacher.	1.39	0.76
8. Most vocational education college professors do not allow for individual differences among their students.	4.00	1.91
9. There is not enough "on-the-job" training in teacher education that counts for college credit.	3.00	2.11
10. Most vocational education college professors organize their lessons well.	3.00	1.63
11. The practical or technical aspects of teacher education programs should concentrate more on a single specialty.	5.00	1.53
12. College professors in vocational education usually teach so as to arouse student interest and motivation.	3.67	1.49

Item	Mean	Standard Deviation
13. There is not an acceptable balance between progress in the various occupational fields and the introduction of this progress into vocational education.	4.44	1.57
14. Most college professors in vocational education react favorably to suggestion and criticism.	3.28	1.28
15. The physical plant (classrooms, shops, laboratories, offices) available during teacher education are most adequate.	3.11	1.73
16. There is not a sufficient amount of time spent in teacher education in the study of the evaluation of students through performance testing.	3.50	1.61
17. The assignments and grades given by vocational education college educators are very fair.	3.22	1.18
18. There is a sufficient amount of expendable materials for use in vocational teacher education projects.	4.00	1.80
19. The supervisors during student teaching are generally thoughtful and instructive.	2.00	1.37
20. Vocational education teachers quite often have a difficult time working out a logical presentation sequence for their lessons.	5.06	1.81
21. Most of the vocational education professors have a good knowledge of their particular subject area.	2.17	1.07
22. Vocational education teachers could do a good job in curriculum planning if called upon to do so.	2.72	1.28
23. The equipment and facilities available during the education of a vocational teacher are not representative of what is presently found in actual occupational fields.	4.39	1.98
24. Student teaching is a valuable experience for vocational education teachers.	1.33	0.75

Item	Mean	Standard Deviation
25. Because of the rapidly changing technology of today, vocational teachers should not stress specific vocational skills, but rather try to give their students a solid technological base from which they can change as new methods are developed.	2.56	1.46
26. Vocational education teachers should concentrate on developing comprehensive rather than specialized skills in their students.	3.17	1.74
27. There should be more stress in vocational teacher education on the social sciences and a general liberal education than is presently found.	4.22	1.75
28. Vocational teachers should be more familiar with ways of providing their students with a greater amount of practical experience.	2.06	1.13
29. The atmosphere, or learning conditions, during practical or technical teacher education training are stimulating and conducive to learning.	2.89	1.37
30. Increasing specialization at the vocational teacher education level and the secondary school level is necessary to keep pace with the rapidly expanding technology of today.	2.89	1.56

* Items with a mean of less than 2.5 or greater than 5.5, and a standard deviation of less than 2.00 are most relevant.

D. Trade and Industrial

Rhode Island College

Trade and industrial teacher education for Rhode Island, situated at Rhode Island College in Providence, is a part-time program. Students enrolled must have met the seven year work experience requirement, originally stipulated in the 1917 Smith-Hughes Act. Presently there are 304 students in the program, all at various levels of course completion. Thirty-five credits are granted to these students for their work experience (applied skills credits), the remaining ninety-three required for graduation being divided in Table X.

Results from the questionnaire (Table XI) indicates that recent graduates are generally satisfied with their education and feel reasonably competent in their teaching ability. There is strong agreement concerning the importance of actual experience in the teacher's occupational area and the value of student teaching. Opinion seems divided over the question of specialized versus comprehensive skills, but it appears to be an issue of significance. On the negative side, there are indications that graduates feel there is not a balance between progress in occupational fields and the material offered in vocational teacher education.

During the academic year 1967-68 there were four staff members directly concerned with the teaching of the vocational education courses. None of these were full-time regular faculty members at the college.

Any individual can be admitted to the program if he is a high school graduate or the equivalent and can prove to the Division of Vocational - Technical Education of the State Department of Education that he has had seven years work experience in an occupational field. The proof is based primarily on written documentation showing that the candidate completed in fact seven years of work experience. When this initial qualification is certified to Rhode Island College by the Department of Education, the candidate is accepted in the program and receives thirty-five credits for his work experience. This procedure is in contrast to that of many

other states which require written and performance tests of the applicant before he is accepted in a program. Research in this area (Giachino, 1961; Schaefer, 1963) show and enumerate the inadequacies of current selective methods. Impelliteri (1965) analyzed individual scores on trade competency exams and found that the number of years of industrial experience an individual had was not necessarily predictive of his test performance. Consequently, the authors believe that the requirements for competency should be more stringent in Rhode Island, especially in view of the fact that thirty-five credits are given automatically for vocational experience. A board of examiners, written and actual performance tests, and a fee for such services would perhaps be a more realistic method than the present procedure in effect.

Since there is presently no course sequence for the professional vocational education courses, students start with whatever course is offered at the time of their initial enrollment. Such a practice is unsound; a set sequence with integrated and meaningful material is required.

Furthermore, the vocational education staff should be required to have the same qualifications as required of the regular college staff, i.e. the staff members should be educated and qualified in the field they are teaching in. Unfortunately, this has not always been the case in vocational teacher education at Rhode Island College.

Recently teacher education programs not requiring extensive occupational experience have been looked at more closely. Ramp (1962) advocated the cooperative trade and teacher training approach, utilizing young people who had made a career decision to teach. Such a program is in effect in Illinois, requiring a two-year technical institute experience, followed by two years of teacher training coursework at the university. Two years of full-time work in a trade area is required.

The Report of the Panel of Consultants on Vocational Education (1963) outlined the teacher education practices across the country, noting the variability and weaknesses of the programs. Since vocational teachers must learn their occupational

skills in industry and their teaching skills in colleges, it was recommended that there be a greater utilization of cooperative type training programs in the future.

In addition to, or perhaps in place of, an improvement of the present trade and industrial teacher education system in Rhode Island, serious consideration should be given to a future work-study program of some type. For example, a program similar to that in Illinois. A work-study teacher education program would have the advantage of training younger teachers, giving them more of an academic background than part-time or night classes, and providing them with a truly integrated educational experience where innovation in technology, industry, and education would meet. In addition, it would undoubtedly produce a larger number of teachers, a factor of crucial importance in Rhode Island where so many of those presently teaching trade and industrial subjects have only emergency teaching certificates.

Rhode Island also sadly lacks facilities for extended technical training of vocational teachers in a collegiate program. The need and desirability of such facilities cannot be denied. Technical skills are in ever-increasing demand, a demand which must be met if progress in industry is to continue. By 1970 the American labor force will total 100 million, 26 million of whom will be young workers having entered the labor force between 1960 and 1970. If youth unemployment, already of great concern, is to decrease, training must be provided which will fit the requirements of a technologically expanding society. The implications of automation alone should force us to move ahead in this direction. Again, the key to providing a useful and flexible technical education to our youth is the qualified teacher.

The role of colleges and universities in the preparation of technical education teachers was mentioned in the report by the American Council on Education (Venn, 1964). Technology has created a new relationship between man, his education, and his work; today education is no longer outside the realm of work, it stands between the man and his work. This is why technical (and vocational) education is

of such vital importance, and why the role of the teacher has grown to such paramount importance.

Regardless of the particular directions vocational education may take, responsible and qualified teachers will remain the keystone of any educational effort.

Conclusion

Vocational teacher education in Rhode Island has been and still is traditional in nature; consequently, it has not expanded to its full potential. Although agriculture, business, and home economics are represented by well-organized college programs which produce qualified graduates, these programs, in comparison, do not have the same broad scope as those in other parts of the nation. The structure of trade and industrial teacher education and the selection of candidates is outdated and inefficient; it was not until 1965 that a college degree was even required to teach in this area. The proportion of graduates from the number of enrolled students is very low, and the number of trade and industrial personnel teaching with emergency certificates is excessive. Distributive and technical teacher education do not exist.

It appears that the basic problem in Rhode Island is that of finding ways to overcome strong traditional ties and then move ahead in directions which have been followed already by more progressive states. This is not to say that Rhode Island should imitate; Rhode Island is in a unique position because of its size and location and must meet its own needs, many of which quite possibly differ from other regions. Nevertheless, much can be learned from other forward looking states; and what is learned can in turn be put to constructive use here in this state.

It is recognized that the problem being discussed here extends far beyond that of vocational teacher education alone. Secondary and post-secondary school philosophy, counselor and teacher attitudes, parent and student attitudes, all these are involved, just to mention a few. Without the support from and the acceptance of the school systems and communities, the graduates of the best teacher education program are ineffective and their talents wasted.

The fact is that attitudes must change before progress starts. Individuals involved, from student and parent to educational administrator, must first understand that vocational and technical education are not second rate and have neither

been designed for the problem kid or potential dropout only, nor for the average or below average student of low financial means. Vocational education is for anyone interested in "applied" skills rather than "pure" knowledge. It should be understood, and perhaps lack of understanding here is one of the major problems, that the range of abilities and intelligence required is very great. Unlike the colleges and universities which are professed to take only the above average student, vocation and technical education must serve those of very high and low ability. It must serve not only the individual with the capacity to service and repair computers, but also the individual with limited capacity who might be fortunate if he can operate a filling station pump right. Personality and motivation should be factors considered in the option between a college and a vocational path. The bright person need not automatically choose college as he so often does today.

It is not necessary to initiate a discussion here concerning the position that all education is in some sense vocational; suffice it to say that the education of engineers, teachers, doctors, lawyers, etc. are in fact all vocational in nature, even if not generally considered so. What is important is to recognize that the word "vocational" should no longer continue to imply second rate education. Vocational and technical education bear responsibility for the bright student to the same degree as does the university. What places such a heavy load on vocational education is the fact that in addition to the bright student it has a responsibility for the below average student also. In this sense vocational and technical education encompass a much wider scope than traditional "academic" education. If this were understood and accepted by all involved, perhaps students would choose more intelligently what their education should be; the result could be individuals satisfied with their employment positions because they would fit their personalities and interests as well as their capabilities.

Advances in vocational and technical education will be made only by keeping these ideas in mind and by the willingness to change attitudes. With a change of

attitudes and a fuller understanding of the extent and implications of vocational education, actual progress in the practice of teacher and student education will inevitably follow.

TABLE X
Rhode Island College
Trade and Industrial Teacher Education Requirements

General & Academic Education

Art 201 or Music 201	(3 cr)	
English 101	(2 cr)	
English 102	(2 cr)	
Speech 101	(1 cr)	
Speech 102	(1 cr)	
Intro. Soc. Sci.	(3 cr)	
Math 113	(3 cr)	
Math 114	(3 cr)	
Psych. 200	(3 cr)	
Sci. Elect.	(3 cr)	Chem. 101, Biol. 101, Physics 101, Phy. Sci. 101.
Sci. Elect. (2 sem.)	(3 cr)	Chem. 102, Biol. 102, Physics 102, Phy. Sci. 102.
Hum. 103	(3 cr)	
Hum. 104	(3 cr)	
Hum. 105	(3 cr)	
Hum. 106	(3 cr)	
Drawing & Design (6)	(3 cr or 2 cr)	
	(3 cr or 2 cr)	
	(2 cr)	
Academic Electives	(18 cr)	

Education (Professional)

Voc. Ed. 300	(3 cr.)	Methods of Teaching Industrial Subjects
Voc. Ed. 301	(3 cr.)	History, Principles and Practices of Industrial Education
Voc. Ed. 302	(3 cr.)	Occupational Analysis and Course Construction
Voc. Ed. 303	(3 cr.)	Shop Planning and Management
Ind. Arts 208	(3 cr.)	First Aid and Shop Safety
Educ. 201	(3 cr.)	Psychological Foundations of Education
Educ. 300	(3 cr.)	Philosophical Foundations of Education
Educ. 321	(9 cr.)	Student Teaching (Secondary), or
323	(9 cr.)	Internship in Industrial Education

TABLE XI

Means and Standard Deviations of Attitudes
Expressed by Recent Trade and Industrial Education Graduates at R.I.C.* N=6 /14

Item	Mean	Standard Deviation
1. I feel that most vocational education teachers are well prepared with respect to methods and techniques of teaching.	2.17	0.69
2. When it comes to lesson planning most teachers feel that they are unable to do a good job of identifying the vocabulary and interest levels that are appropriate for students.	5.17	1.67
3. Most teachers find it difficult to construct written tests and accurately evaluate students through them.	3.50	1.80
4. It is difficult to evaluate students through the use of oral tests.	6.00	0.82
5. Most vocational education teachers feel confident in their command of the subject matter when they are planning their lessons.	2.17	2.19
6. Generally speaking, most vocational education teachers are well-trained in their occupational specialties.	1.83	1.46
7. Actual practical experience in a teacher's occupational field would help him to be a better teacher.	1.00	0.00
8. Most vocational education college professors do not allow for individual differences among their students.	3.17	1.77
9. There is not enough "on-the-job" training in teacher education that counts for college credit.	3.50	2.14
10. Most vocational education college professors organize their lessons well.	2.83	1.34
11. The practical or technical aspects of teacher education programs should concentrate more on a single specialty.	3.50	1.61
12. College professors in vocational education usually teach so as to arouse student interest and motivation.	3.00	1.53

Item	Mean	Standard Deviation
13. There is not an acceptable balance between progress in the various occupational fields and the introduction of this progress into vocational education.	2.33	1.11
14. Most college professors in vocational education react favorably to suggestion and criticism.	4.00	2.00
15. The physical plant (classrooms, shops, laboratories, offices) available during teacher education are most adequate.	3.83	1.77
16. There is not a sufficient amount of time spent in teacher education in the study of the evaluation of students through performance testing.	3.17	1.86
17. The assignments and grades given by vocational education college educators are very fair.	3.17	1.67
18. There is a sufficient amount of expendable materials for use in vocational teacher education projects.	5.33	1.11
19. The supervisors during student teaching are generally thoughtful and instructive.	3.83	1.67
20. Vocational education teachers quite often have a difficult time working out a logical presentation sequence for their lessons.	4.83	2.11
21. Most of the vocational education professors have a good knowledge of their particular subject area.	2.83	1.34
22. Vocational education teachers could do a good job in curriculum planning if called upon to do so.	1.67	1.11
23. The equipment and facilities available during the education of a vocational teacher are not representative of what is presently found in actual occupational fields.	2.17	0.90
24. Student teaching is a valuable experience for vocational education teachers.	1.50	0.76
25. Because of the rapidly changing technology of today, vocational teachers should not stress specific vocational skills, but rather try to give their students a solid technological base from which they can change as new methods are developed.	3.00	1.73

Item	Mean	Standard Deviation
26. Vocational education teachers should concentrate on developing comprehensive rather than specialized skills in their students.	2.83	1.67
27. There should be more stress in vocational teacher education on the social sciences and a general liberal education than is presently found.	4.17	1.39
28. Vocational teachers should be more familiar with ways of providing their students with a greater amount of practical experience.	2.50	1.71
29. The atmosphere, or learning conditions, during practical or technical teacher education training are stimulating and conducive to learning.	3.83	0.69
30. Increasing specialization at the vocational teacher education level and the secondary school level is necessary to keep pace with the rapidly expanding technology of today.	2.17	1.16

* Items with a mean of less than 2.5 or greater than 5.5, and a standard deviation of less than 2.00 are most relevant.

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